

REMARKS

Applicant amends claims 32, 37, 40, and 41. The amendments to claims 32, 37, and 40 are minor clarifications. The amendments to claim 40 and 41 are supported, e.g., by FIGS. 2 and 3 and associated text.

35 U.S.C. §101 Rejections

The Examiner rejected claim 45 under 35 U.S.C. §101 as being unpatentable. Applicant respectfully disagrees. Nonetheless, Applicant has amended claim 45 as follows: “A computer program product comprising a non-transitory computer-readable memory medium bearing computer program code embodied therein for use with a computer”. According to the Interim Patent Subject Matter Eligibility Examination Instructions issued by the Acting Deputy Commissioner for Patent Examination Policy on August 24, 2009, this amendment should place the claim in accord with §101. Therefore, Applicant requests the §101 rejection to claim 45 be withdrawn.

As for the requirement to add the term “non-transitory”, this requirement is not understood. First, Applicant respectfully disagrees that the claims as they were prior to instant amendment were not patent-eligible under 35 U.S.C. §101. For instance, the claims prior to the instant amendment stated the following: “A computer program product comprising a computer-readable *memory* medium bearing computer program code embodied therein for use with a computer”. In what way can a carrier wave be a “memory” medium? If a carrier wave is “transitory” then how can the carrier wave be a “memory medium”? It is believed that the term “memory medium” places claim 45 within the ambit of §101.

Second, the Patent Office has never defined the terms “transitory” and “non-transitory” and the ambit of each is unclear. For instance, a compact disk is commonly assumed to be a computer-readable medium but the undersigned has multiple compact disks that are scratched and no longer readable. Therefore, an argument can be made that a compact disk is a “transitory” computer-readable medium. Furthermore, compact disks and

DVDs are known to lose their programming over time, even without scratching. Therefore, are these media transitory or non-transitory? The requirement by the Patent Office to add “non-transitory” to these types of claims should be removed or adequately explained.

35 U.S.C. §103(a) Rejections

The Examiner rejected claims 1-20, 32-37, 40, 41, and 45 under 35 U.S.C. §103(a) as being unpatentable over Denenberg, U.S. Patent no. 6,859,649, in view of Coyne, U.S. Patent no. 5,943,619. Applicant respectfully disagrees.

In the outstanding Office Action, the Examiner has elaborated as to how Denenberg is allegedly relevant to the instant claims. Specifically, the elaboration involves the aspect of “changing the subscription information” and refers to the paragraph bridging columns 7 and 8 in Denenberg. This paragraph states the following:

Initially, the services administrative center receives a service registration call, step 501. This service registration call can occur at initial activation of the wireless device or, alternatively the call could be received at a time subsequent to activation when the user decides to take advantage of a new service offering or to change service subscriptions. Having received the registration call, the administrative center obtains the ESN of the mobile device, step 505. This information could be conveyed automatically by the mobile device. Alternatively, this information could be conveyed over a voice communication from the operator of the mobile device to the administrative center. The representative can then retrieve device capabilities from the ESN database, step 509. This ESN database may have been populated, in part, with reference to information received from a national distribution center or from the equipment manufacturers themselves. The national distribution center would keep track of all ESNs either sold or leased or awaiting sale or lease by the wireless service provider. Once the device capabilities have been retrieved the fields of the registration form can be populated with retrieved information, step 513. The subscriber can then identify the service or services desired and that information would be received by the administrative center, step 517. Having received the device capabilities, the representative can determine whether the capabilities are consistent with the requested service, step 521. If the device is capable of handling the requested service as determined in the decision step, 525 then the representative can obtain a location identifier of the subscriber at step 533. If, however, the device is not capable of handling the

requested service then the registration attempt may be terminated. A few alternative arrangements are worth noting. First, the representative can make the determination based on an examination of device capabilities as set forth in the populated registration form. Alternatively, the system itself may automatically make a determination whereby any attempt by the representative to register the subscriber for a given service will be denied if the ESN indicates that the equipment is incompatible with the service. That is, the system could prevent any override by the representative and could automatically block registration for the desired service. As a further aside, rather than terminating the registration attempt completely as in step 529, it is possible to terminate that given registration attempt and prompt the representative and/or subscriber to make another attempt at registration, this time to a service consistent with the equipment capabilities.

Denenberg, col. 7, line 46 to col. 8, line 24. This paragraph appears to disclose that the service registration call can be received when the user decides to change service subscriptions.

However, it is respectfully submitted that the comments of the Examiner do not solve the following exemplary differences with claim 1 and Denenberg: According to claim 1 (for instance), there is a network element currently serving the terminal device; When the subscription information change in Denenberg happens, according to the teachings of Denenberg, there does not seem to be any network element currently serving the user at the moment when the service registration call is performed.

Thus, Denenberg is clearly missing the checking operation in independent claim 1. And since there is no such checking in Denenberg, also there is no new registration process as a result of the checking.

Furthermore, the above cited text from Denenberg states "If the device is capable of handling the requested service as determined in the decision step, 525 then the representative can obtain a location identifier of the subscriber at step 533." It is clear that the "device" is the *mobile/wireless device* of the *user*. That is, in Denenberg, it is determined whether the user's mobile/wireless device is capable of handling a service.

By contrast, in independent claim 1, the checking involves checking whether a capability of a **network element serving** a terminal device of a subscriber is still in accordance with changed subscription information. That is, the terminal device of the subscriber is known to be able to handle the changed subscription service (or at least whether the terminal device is able to handle the changed subscription service is not addressed in claim 1), and instead it is determined whether the **network element** that serves the terminal device (and not the terminal device itself) is in accordance with the changed subscription information.

Additionally, Applicant respectfully notes that, according to Denenberg, the activation of the phone and the service registration appear to be two different processes. Thus, when the terminal is activated in Denenberg, no service request has necessarily been sent and thus no serving network element for the terminal appears to exist even if the terminal might have been activated. In col. 7, lines 47-49 of Denenberg, it is said that the service registration call (that is, when a user decides to change subscription information) can occur any time after activation, but this section is silent that this could be done any time after already ongoing service (i.e., an already sent and accepted service registration request).

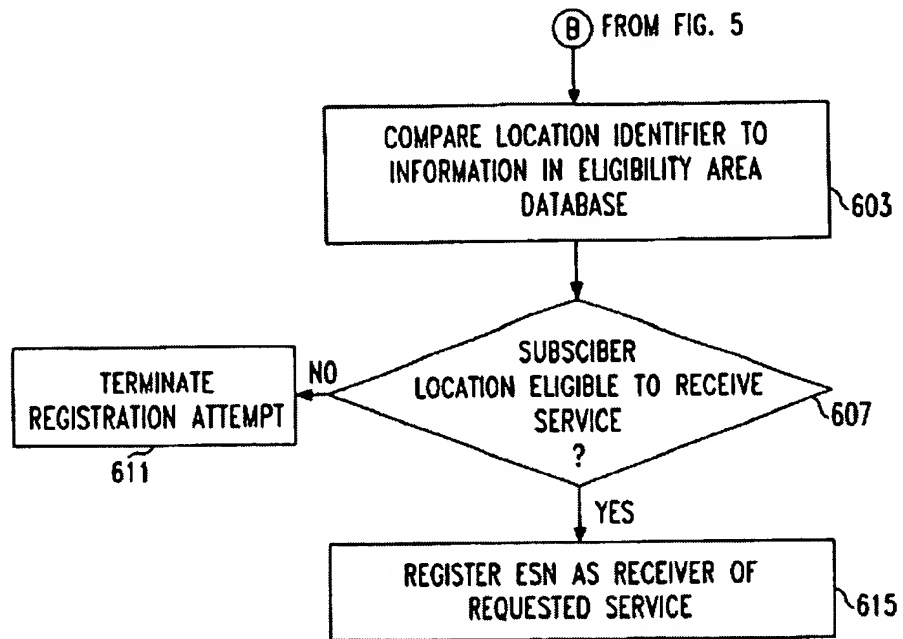
See the following from Denenberg:

At the time of **registration for a service**, the mobile subscriber can provide information to the administrative center including an identification of the mobile communication device itself. **This can be done at the time of activation** in which case the subscriber would need to use a device other than the mobile device in question to contact the center. Alternatively, **if the device has previously been activated then it can be used in the registration process**.

Denenberg, col. 5, line 63 to col. 6, line 3 (emphasis added).

Furthermore, what Denenberg appears to disclose is that if a “home” location of a subscriber supports a service, the ESN of the subscriber is registered as a receiver of the requested service. On the other hand, if the “home” location of a subscriber does not support

a service, the subscriber is never registered to a "new" entity that supports the service.
See FIG. 6 of Denenberg:



See also this section from col. 8 of Denenberg:

25 Continuing at point B on FIG. 6, once the location
identifier information is received, it is compared to infor-
mation in the eligibility area database, step 603. A decision
step then determines whether the subscriber location is
eligible to receive the service, step 607. If it is not eligible
30 then the registration attempt may be terminated, step 611.
Alternatively, if the location is eligible then the system may
register the ESN as a receiver of the requested service, step
615.

Just as described above, the terminating operation may
35 only terminate as to this particular service request and may
in fact either prompt the user to request an alternative service
or may await additional information from the user as to
whether any alternative services are of interest. Additionally,
the termination may occur either by information provided to
40 the representative or may occur automatically. That is,
access to the eligibility area database may produce a mes-
sage to the representative indicating that the potential sub-
scriber is not eligible for the service given the "home"
location of the subscriber. The representative could then
45 propose an alternative to the initially requested service
thereby terminating the attempt to register for the first
service. Alternatively, the system could automatically ter-
minate the registration attempt such that the representative
could not override the system's limitations so that if the
50 representative attempts to register the subscriber for the
requested service that attempt will be thwarted.

In other words, if the "home" location does not support the requested service, either the registration is terminated or a different service to which the "home" location supports is proposed. Therefore, if the "home" location of a subscriber does not support a service, the subscriber is **never registered to a "new" entity that supports the service.**

Thus, Denenberg does not disclose at least the subject matter of "checking whether a capability of a network element serving a terminal device of said subscriber is still in accordance with said changed subscription information" and "initiating, in response to a result of said checking being that said capability of said network element serving said terminal device of said subscriber is not still in accordance with said changed subscription information, a registration procedure for registering said terminal device of said subscriber to a new serving network element that is in accordance with said changed subscription information", where the initiating is relative to a network element already serving the terminal device, in claim 1.

Regarding Coyne, the Examiner states the following in the outstanding Office Action:

However, *Denenberg* does not expressly disclose initiating a registration procedure for registering a terminal device if the changed subscription information is not in accordance with the capability of the network element.

Coyne, in the same field of endeavor, teaches registering a terminal device to a new network element, MSC/VLR, if the changed subscription information is not in accordance with the capability of the network element, MSC/HLR. (Column 7, Lines 61-67 and Column 8 Lines 15-26).

Outstanding Office Action, page 4. Applicant respectfully submits that not only does Coyne not disclose in the cited sections what the Examiner asserts this reference discloses, but also Coyne does not cure the defects of Denenberg.

Coyne in the cited sections describes FIG. 5, reproduced below.

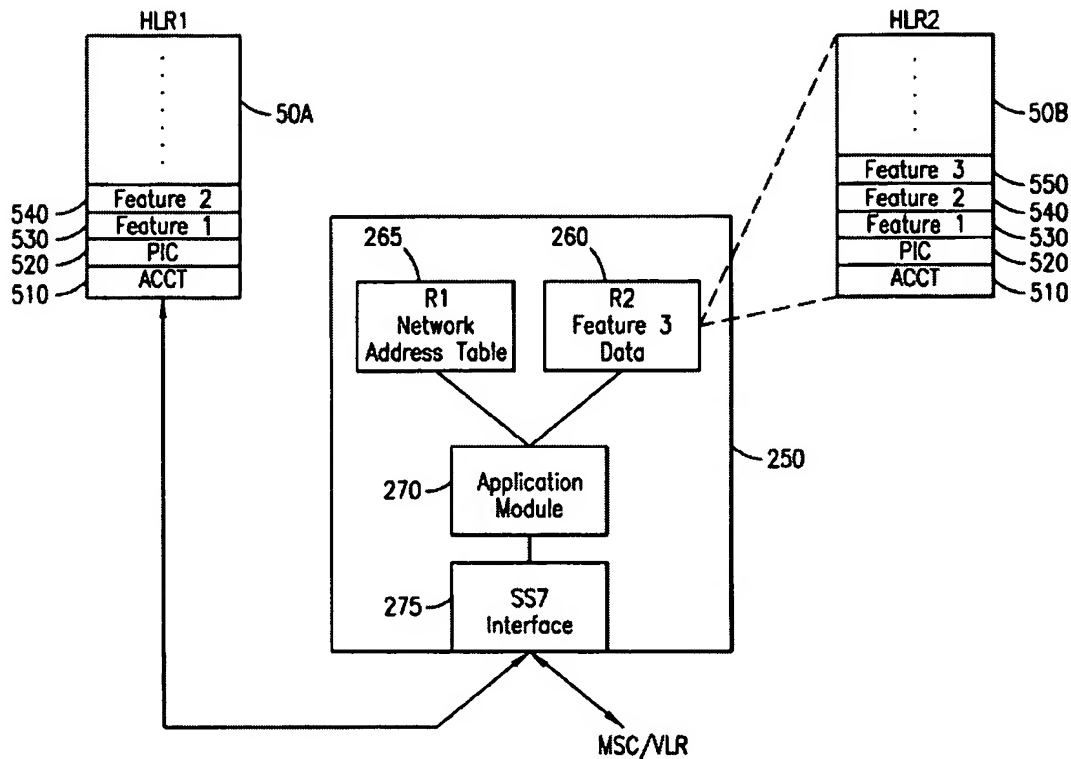


FIG. 5

Coyne states the following:

FIG. 5 is a block diagram of a protocol enhancer (PE) interfaced between an HLR and an MSC/VLR. A first home location register (HLR1) 50A associated with a first PLMN, for example, stores data 510 reflecting the accounting or billing information associated with a particular mobile station or subscriber. The first HLR 50A further stores preferred inter-LATA carrier information 520 associated with the associated mobile subscriber. Subscriber feature data 530-540 are further stored at the first HLR1 50A. Such subscriber feature data, for example, indicate which forward to number 530 is to be used for a call forwarding on busy (CFB) feature, and which barring categories 540 are currently placed on the associated mobile subscriber. Such subscriber data are then communicated to a serving

MSC/VLR to effectuate mobile service in a uniform manner throughout the first PLMN.

A second home location register (HLR2) 50B similarly stores subscriber data for its own mobile subscribers. However, because the second PLMN might provide additional subscriber features than the first PLMN, the second HLR 50B may store additional subscriber data 550 representing a subscriber feature not available or supported by the first PLMN.

Accordingly, in accordance with the teachings of the present invention, the subscriber data 550 pertaining to the additional subscriber feature are stored within a register (R2) associated with the PE 250.

Whenever the PE 250 receives a location update from an MSC/VLR located within the second PLMN yet serving a mobile station associated with the first PLMN, an application module 270 receives the transmitted signal over a connected Signaling System No. 7 (SS7) based interface module 275. The application module 270 identifies the home location register (HLR1) 50A associated with the indicated IMSI number and stores data correlating the identified HLR1 50A with the serving MSC/VLR at a register (R1) 265. The application module 270 then performs the location update with the HLR1 50A.

The application module 270 receives the subscriber data 510-540 associated the roaming mobile station from the HLR1 50A. The application module 270 then retrieves the stored subscriber data 550 representing the subscriber feature additionally provided within the visited PLMN from the register (R2) 260. **Using the previously stored data correlating the HLR1 50A with serving MSC/VLR, the application module thereafter communicates both data to the serving MSC/VLR. The serving MSC/VLR then utilizes the received combined subscriber data to provide otherwise undefined or not subscribed subscriber feature to the roaming mobile station.**

Coyne, col. 7, line 45 to col. 8, line 26 (emphasis added). It is clear in this section of Coyne that the serving MSC/VLR does not change (or was changed prior to when the PE 250 received the location update).

It is further noted that there is no determination in this (or any other) section of Coyne as to whether the MSC/VLR in the visited (second) PLMN actually supports the subscribed features or initiating a registration procedure for registering a terminal device of a subscriber to a new serving network element that is in accordance with the changed subscription information. This is true because the MSC/VLR in the visited (second) PLMN

supports the additional feature 3, 550 that is not supported by the home (first) PLMN corresponding to HLR1 and also supports the features 1, 530 and 2, 540 that are supported by the PLMN corresponding to the HLR1.

See also the following from Coyne:

Such additional subscriber data stored at the register (R3) 260 and utilized by the application module 270 within the PE 250 may be defined by service operators while making a roaming agreement between the first PLMN 10A and the second PLMN 10B. As a result, **all mobile stations associated with the first PLMN 10A and roaming into the second PLMN 10B may be provided with operator defined features and services without independently being subscribed to by each mobile subscriber.**

Coyne, col. 6, line 61 to col. 7, line 2 (emphasis added). In other words, in Coyne, mobile stations associated with a home/first PLMN that roam into a second PLMN are *automatically provided* with certain features and services and the MSC/VLRs servicing the second PLMN by definition support those automatically provided features and services. Consequently, there is no need in Coyne for a determination as to whether the MSC/VLR in the visited (second) PLMN actually supports the subscribed features or for an initiation of a registration procedure for registering a terminal device of a subscriber to a new serving network element that is in accordance with the changed subscription information.

Thus, the combination of Denenberg and Coyne do not disclose at least the subject matter of “checking whether a capability of a network element serving a terminal device of said subscriber is still in accordance with said changed subscription information” and “initiating, in response to a result of said checking being that said capability of said network element serving said terminal device of said subscriber is not still in accordance with said changed subscription information, a registration procedure for registering said terminal device of said subscriber to a new serving network element that is in accordance with said changed subscription information” of claim 1, and the §103(a) rejections to these claims should be withdrawn.

Independent claim 32 is also patentable over the combination of Denenberg and Coyne, as this claim recites “initiating a registration procedure for registering a terminal device of said subscriber to a new serving network element in response to a result of a checking operation that has checked whether a capability of a network element serving said terminal device of said subscriber is still in accordance with said changed subscription information and that has determined said result is that said capability of said network element serving said terminal device of said subscriber is not still in accordance with said changed subscription information, and wherein said new serving network element is in accordance with said changed subscription information.” Independent claim 37 is patentable over the combination of Denenberg and Coyne, as this claim recites “receiving a de-register message containing a cause information, which indicates a reason for the de-register message, the reason indicating that a result of a checking operation for checking a capability of the serving network element indicates that the capability is not in accordance with a change in subscription information of a subscriber associated with the apparatus” and “in response to said de-register message, initiating automatically a new initial registration procedure for registering said apparatus to a new serving network element providing session control services for said apparatus, wherein the new serving network element is in accordance with said changed subscription information.” Claim 40 is also patentable over the combination of Denenberg and Coyne, as this claim recites “checking whether a capability of a current serving network element serving a terminal device of a subscriber is still in accordance with a change in subscription information” and “in response to a result of the checking indicating the capability of the current serving network element serving the terminal device of the subscriber is not still in accordance with the change in subscription information, performing a registration procedure for registering said terminal device to a new serving network element that is in accordance with the change in subscription information.” Claim 45 is also patentable over the combination of Denenberg and Coyne, as this claim recites “code for checking whether a capability of a network element serving a terminal device of said subscriber is still in accordance with said changed subscription information” and “code for initiating, in response to a result of said checking being that said capability of said network

element serving said terminal device of said subscriber is not still in accordance with said changed subscription information, a registration procedure for registering said terminal device of said subscriber to a new serving network element that is in accordance with said changed subscription information”.

Thus, independent claims 1, 32, 37, 40, 41, and 45 are patentable over the combination of Denenberg and Coyne. Because these claims are patentable, their dependent claims 2-20, 33-36, 38, 39, 41, and 43 are patentable for at least the above reasons. It should be noted that Applicant is not admitting that the combination of Denenberg and Coyne is valid; only that such combination need not be examined at this time.

Applicant respectfully requests the §103 rejections to claims 1-20, 32-37, 40, 41, and 45 be removed.

35 U.S.C. §103(a) Rejections

The Examiner rejected claims 38 and 39, and 43 under 35 U.S.C. §103(a) as being unpatentable over Denenberg in view of Coyne and in further view of Wang, U.S. Patent Publication no. 2002/0131395. Because independent claim 37 is patentable, its dependent claims 38 and 39 are patentable for at least the reasons given above.

The Examiner rejected claim 43 under 35 U.S.C. §103(a) as being unpatentable over Denenberg in view of Coyne and in further view of Sanchez, U.S. Patent Publication no. 2002/0147845. Because independent claim 40 is patentable, its dependent claim 43 is patentable for at least the reasons given above.

Applicant respectfully requests the §103 rejections be removed.

Conclusion

Based on the foregoing arguments, it should be apparent that all remaining claims are thus allowable over the reference(s) cited by the Examiner, and the Examiner is


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Art Unit: 2456

respectfully requested to reconsider and remove the rejections. The Examiner is invited to call the undersigned attorney for any issues.

S.N. 10/501,944
Art Unit: 2456



Respectfully submitted:



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10/27/10
Date

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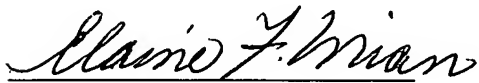
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